

REMARKS

This is in response to the Office Action dated June 25, 2004, and the references cited therewith.

Claims 2 and 5 are amended, no claims are canceled, and no claims are added; as a result, claims 1-25 and 35-50 are now pending in this application.

Claim 2 is amended to more clearly recite the claimed subject matter. The amendment of claim 2 is supported by the specification, including, for example, the portion at page 8, lines 1-21.

§112 Rejection of the Claims

Claim 5 was rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claim 5 is amended to depend from claim 7 which provides antecedent basis for the particular claim element.

§102 Rejection of the Claims

Claims 1-11, 13-25, 35-43 and 45-50 were rejected under 35 USC § 102(e) as being anticipated by Lading et al. (U.S. Pat. No. 6,493,090 B1).

Applicant respectfully traverses the rejection and submits that *prima facie* anticipation has not been established. For example, as to claim 1, Applicant is unable to find, in Lading, a teaching or disclosure of a duct having an interior surface and a substantially parallel gap formed by a first wall and a second wall of said duct, said first wall and said second wall are transparent, as recited in the claim. The Office Action refers to "microfluidics handling system 13" however Applicant is unable to find, in Lading, a teaching wherein item 13 is described as recited in the claim. In addition, Applicant is unable to find, in the cited portions of Lading, a teaching or disclosure that renders the claimed subject matter anticipated. Thus, it appears, the Office Action has not established *prima facie* anticipation.

As to claim 13, Applicant is unable to find, in Lading, a teaching or disclosure of a light receiver responsive to light reflected from said cavity, as recited in the claim. In addition, Applicant is unable to find, in Lading, a teaching or disclosure of a light source illuminating said first translucent plate at a predetermined angle relative to said first translucent plate, as recited in claim 13. The Office Action refers to selected portions of Lading however, Applicant notes that the cited document does not appear to teach the identical subject matter in as complete detail as is contained the claim. In addition, Applicant submits that Lading does not show the identical subject matter in as complete detail as is contained in the claim. For example, Applicant notes that lasers 60 and 62 of Lading do not appear to be arranged as recited in the claim.

As to claim 35, Applicant notes that the cited portion of the M.P.E.P. (§ 2112.02) states that if a prior art device in its normal and usual operation, would necessarily perform the method claimed, then the method claimed would be anticipated by the prior art device. Without admitting that Lading is prior art, Applicant submits that the Lading device does not, in its normal and usual operation, entail determining a refractive index for said chamber with fluid. Instead, Applicant notes that Lading refers to "light from two lasers is mixed . . . and a beat frequency is measured . . . " (*Abstract*). Thus, Applicant submits that Lading does not, in its normal and usual operation, necessarily perform the method claimed.

As to claim 42, Applicant is unable to find, in Lading, a teaching or disclosure of a sensor means for receiving reflected light emanating from said chamber means, said reflected light is based on said first refractive index and said second refractive index, as recited in the claim. In addition, Applicant is unable to find, in Lading, a teaching or disclosure of processing means for determining a refractive index of said sample fluid, as recited in claim 13. Thus, it appears, Lading does not teach the identical subject matter in as much detail and as arranged in the claim.

Applicant respectfully submits that dependent claims 2-11, 14-25, 36-41, 43 and 45-50 depend ultimately from base claims 1, 13, 35 and 42. For at least those reasons set forth above, Applicant submits that the dependent claims are in condition for allowance.

Reconsideration and allowance of claims 1-11, 13-25, 35-43 and 45-50 is respectfully requested.

§103 Rejection of the Claims

Claims 12 and 44 were rejected under 35 USC § 103(a) as being unpatentable over Lading et al., in view of Ebersole et al. (U.S. Pat. No. 5,658,732 A).

Applicant respectfully traverses the rejection and submits that *prima facie* obviousness has not been established. For example, Applicant submits that the proposed combination of Lading and Ebersole is improper because each operates according to different principals. Lading refers to a beat frequency resulting from mixed light signals. In contrast to Lading, Ebersole refers to monitoring for changes in a light propagation (column 5, lines 61-62). Thus, it appears, to combine Lading and Ebersole in the manner proposed would require changes in the principal of operation of one or both documents.

Even if the proposed combination of Lading and Ebersole were proper, Applicant submits that all elements of the claim are not taught or suggested. In particular, the addition of Ebersole does not cure the shortcomings noted above with regard to the Lading disclosure as to claims 1 and 35, from which claims 12 and 44, respectively, ultimately depends.

For these and other reasons, it appears that *prima facie* obviousness has not been established. Reconsideration and withdrawal of the rejection is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney at (612) 373-6911 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

HAROLD G. CRAIGHEAD ET AL.

By their Representatives,

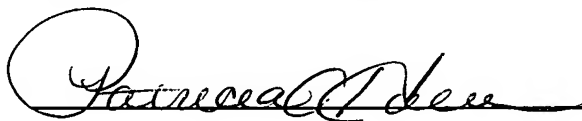
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CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 23rd day of November, 2004.

PATRICIA A. HULTMAN

Name



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